

Abstract

A plasma processing method allows to suppress the drop of the etching rate of the depositions-process without performing an additional seasoning process right after the dry cleaning process. The method includes a first and a second plasma processing step carried out in a single chamber and a step of dry cleaning an inside of the chamber by using a dummy substrate between the first and the second plasma processing step. Deposits are substantially accumulated in the chamber during the first plasma processing step, while substantially no deposits are accumulated in the chamber during the second plasma processing step. The dry cleaning step is performed by supplying into the chamber a deposit removing gas for removing the deposits produced in the chamber during the first plasma processing step and a dummy substrate etching gas capable of etching the dummy substrate.